AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows.

1. (Currently Amended) A charged coupled-device (CCD) image sensor comprising:

at least four charge transfer devices each transferring signal charges in a column direction;

a single charge-detecting capacitor receiving signal charges at different timings from one another from said charge transfer devices through an output gate to which said charge transfer devices are connected; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor.

2. (Original) The CCD image sensor as set forth in claim 1, wherein said output gate is comprised of gate electrodes in three stages, arranged in a direction in which said signal charges are transferred.

3. (Previously Presented) The CCD image sensor as set forth in claim 2, wherein a middle-stage gate electrode has includes a projection projecting towards an initial-stage gate electrode.

4. (Previously Presented) The CCD image sensor as set forth in claim 1, further comprising:

a diode row extending between charge transfer devices located adjacent to each other, said diode row including a first group of photodiodes supplying signal charges to one of said charge transfer devices and a second group of photodiodes supplying signal charges to the other of said charge transfer devices, photodiodes belonging to said first group and photodiodes belonging to said second group being alternately arranged.

5. (Original) The CCD image sensor as set forth in claim 4, wherein a first diode row extending between a pair of charge transfer devices and a second diode row extending between another pair of charge transfer devices are arranged at pitches different from each other.

6. (Previously Presented) The CCD image sensor as set forth in claim 1, further comprising:

a first diode row and a second diode row both extending between charge transfer devices located adjacent to each other,

wherein said first diode row supplies signal charges to one of said charge transfer devices and said second diode row supplies signal charges to the other of said charge transfer devices, and

photodiodes in said first diode row and photodiodes in said second diode row are staggered by a half pitch.

7. (Original) The CCD image sensor as set forth in claim 6, wherein two diode rows extending between a pair of charge transfer devices and two diode rows extending

between another pair of charge transfer devices are arranged at pitches different from each other.

8. (Previously Presented) A charged coupled-device (CCD) image sensor comprising:

first, second and third charge transfer devices each transferring signal charges in a column direction;

a first diode row extending between said first and second charge transfer devices, said first diode row including a first group of photodiodes supplying signal charges to said first charge transfer device and a second group of photodiodes supplying signal charges to said second charge transfer device wherein photodiodes belonging to said first group and photodiodes belonging to said second group are alternately arranged;

a second diode row extending between said second and third charge transfer devices, said second diode row including a third group of photodiodes supplying signal charges to said second charge transfer device and a fourth group of photodiodes supplying signal charges to said third charge transfer device, wherein photodiodes belonging to said third group and photodiodes belonging to said fourth group are alternately arranged;

a charge-detecting capacitor receiving signal charges at different timings from one another from said first to third charge transfer devices through an output gate to which said first to third charge transfer devices are connected; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor.

9. (Original) The CCD image sensor as set forth in claim 8, wherein said

output gate is comprised of gate electrodes in three stages, arranged in a direction in which said signal charges are transferred.

10. (Previously Presented) The CCD image sensor as set forth in claim 9, wherein a middle-stage gate electrode has includes a projection projecting towards an initial-stage gate electrode.

11. (Previously Presented) A charged coupled-device (CCD) image sensor comprising:

a first diode row comprised of photodiodes arranged in a row;

a second diode row extending in parallel with said first diode row and comprised of photodiodes arranged in a row, photodiodes in said second diode row being staggered by a half pitch relative to photodiodes in said first diode row;

a first charge transfer device transferring signal charges received from K-th photodiodes in said first diode row wherein K is an odd number;

a second charge transfer device transferring signal charges received from L-th photodiodes in said first diode row wherein L is an even number;

a third charge transfer device transferring signal charges received from K-th photodiodes in said second diode row;

a fourth charge transfer device transferring signal charges received from L-th photodiodes in said second diode row;

a charge-detecting capacitor receiving signal charges at different timings from one another from said first to fourth charge transfer devices; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor.

12. (Previously Presented) A charged coupled-device (CCD) image sensor comprising:

a first diode row comprised of photodiodes arranged in a row;

a second diode row extending in parallel with said first diode row and comprised of photodiodes arranged in a row, photodiodes in said second diode row being staggered by a half pitch relative to photodiodes in said first diode row;

a third diode row comprised of photodiodes arranged in a row, photodiodes in said third row being staggered by a quarter pitch relative to photodiodes in said first diode row;

a fourth diode row extending in parallel with said third diode row and comprised of photodiodes arranged in a row, photodiodes in said fourth diode row being staggered by a quarter pitch relative to photodiodes in said second diode row;

first to fourth charge transfer devices transferring signal charged received from said first to fourth diode rows, respectively;

a charge-detecting capacitor receiving signal charges at different timings from one another from said first to fourth charge transfer devices; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor.

13. (Previously Presented) A charged coupled-device (CCD) image sensor comprising:

a first diode row comprised of photodiodes arranged in a row;

a second diode row extending in parallel with said first diode row and comprised of

photodiodes arranged in a row, photodiodes in said second diode row being staggered by a half pitch relative to photodiodes in said first diode row;

a third diode row extending in parallel with said first and second diode rows and comprised of photodiodes arranged in a row, photodiodes in said third row being arranged at a pitch twice greater than a pitch at which photodiodes in said first and second rows are arranged;

first to third charge transfer devices transferring signal charged received from said first to third diode rows, respectively;

a charge-detecting capacitor receiving signal charges at different timings from one another from said first to third charge transfer devices; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor.

14. (Previously Presented) The CCD image sensor as set forth in claim 13, further comprising:

a first charge-drainer to which signal charges ejected from said first and second diode rows are drained, and a second charge-drainer to which signal charges ejected from said third diode row are drained, and wherein one of said first and second charge-drains is activated.

15. (Previously Presented) A charged coupled-device (CCD) image sensor comprising:

a plurality of charge transfer devices each transferring signal charges in a column direction;

a charge-detecting capacitor receiving signal charges at different timings from one

another from said charge transfer devices through an output gate to which said charge transfer devices are connected; and

a charge-detector detecting signal charges stored in said charge-detecting capacitor,

said output gate being comprised of gate electrodes in a plurality of stages, arranged in a direction in which said signal charges are transferred,

a second- or later-stage gate electrode having a projection projecting towards the previous-stage gate electrode.

16. (Original) The CCD image sensor as set forth in claim 15, wherein said output gate is comprised of gate electrode in three stages.

17. (Previously Presented) The CCD image sensor as set forth in claim 16, wherein a second-stage gate electrode has includes a projection located between two charge transfer devices located adjacent to each other, when viewed from above, and a third-stage gate electrode has a projection located at the center of said charge-detecting capacitor, when viewed from above.

18. (Previously Presented) The CCD image sensor according to claim 1, wherein said at least four charge transfer devices comprise:

at least two dual CCD-type CCD image photodiodes.

19. (Previously Presented) The CCD image sensor according to claim 1, wherein said at least four charge transfer devices comprise:

a CCD image sensor that outputs a single type of image signal.

20. (Previously Presented) The CCD image sensor according to claim 1, wherein said signal charges received at different timings from one another are controlled by at least two dual-phase driving signals.